

Citation for published version:

Corr, P.J, Hargreaves-heap, S, Tsutsui, K, Russell, A & Seger, C 2013, 'Personality and social attitudes: Evidence for positive-approach motivation', *Personality and Individual Differences*, vol. 55, no. 7, pp. 846-851.
<https://doi.org/10.1016/j.paid.2013.07.012>

DOI:

[10.1016/j.paid.2013.07.012](https://doi.org/10.1016/j.paid.2013.07.012)

Publication date:

2013

Document Version

Early version, also known as pre-print

[Link to publication](#)

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RUNNING HEAD: PERSONALITY AND SOCIAL ATTITUDES

Personality and Social Attitudes:
Evidence for Positive-Approach Motivation

Abstract

Extensive research has linked general personality factors to social attitudes, but there has been comparatively little work on the roles played by specific approach-avoidance personality factors, especially positive-approach ones. Here we relate such factors to the two main clusters of social attitudes (Right-Wing Authoritarianism, RWA; and Social Dominance Orientation, SDO), and related cognitive constructs (Need for Cognition and Need for Closure) Results revealed: (a) positive-approach motivation is consistently related to both RWA and SDO, with little contribution from negative-avoidance motivation; and (b) negative-avoidance motivation played a part in need for cognition (negatively related) and need for closure (positively related). These data challenge previous theorizing concerning the role of fear/anxiety in social attitude formation and prejudice more generally. We conclude that, to a larger extent than previously thought, social attitudes are related to positive-approach factors which produce positively reinforcing effects, and this may account for the failure of programmes designed to reduce prejudice which have been based on the reduction of negative emotion and motivation.

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Introduction

The possibility that basic approach and avoidance motivational systems may underlie social attitudes, and prejudice more generally, has received scant attention in the research literature. Building upon Hans Eysenck's pioneering work, started during the 1940s (Eysenck, 1944, 1947, 1954), there has long been an interest in the structural overlap of social attitudes and personality, and this work has now been extended to the five-factor model (FFM). However, the significant advances made in our understanding of the major systems of approach and avoidance motivation (Corr, DeYoung, & McNaughton, 2013) have, so far, not been applied. The aim of this paper is to fill this theoretical and empirical lacuna.

Early Work

The earliest psychological literature on social attitudes and prejudice (i.e., negative evaluations of others based on group membership) generally sought explanations through the construct of the 'prejudiced personality' (e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Reichard, 1948; Rokeach, Smith, & Evans, 1960). Allport (1954) articulated the mainstream view by claiming that the cognitive processes of prejudiced people differed from those of the non-prejudiced. For example, Gough (1951) used 32 items from the Minnesota Multiphasic Personality Inventory to create a prejudice scale, which correlated with bias toward various groups. Similarly, Adorno et al. (1950) contended that prejudice was a general personality factor, which included traits such as cognitive rigidity and adherence to traditional values. Although influential, their F-scale (Sanford, Adorno, Frenkel-Brunswik, & Levinson, 1950) began to fall out of favour as questions regarding its explanatory power and theoretical heft were raised. In time, the notion of a 'prejudiced personality' gave way to social-cognitive perspectives; for example, Social Identity theory (Tajfel & Turner, 1986) and Relative

Deprivation Theory (e.g., Guimond & Dambrun, 2002). While these perspectives have much to commend them, typically they fail to account for individual differences in levels and expressions of social attitudes and prejudice.

Structure of Social Attitudes

Recent years has witnessed something of a consensus on the nature of the structure of social attitudes. Duckitt and Sibley (2010) review the literature and present a dual-process motivational model which distinguishes between the two major factors: Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO) – for reasons detailed in their paper, these are best viewed as social *attitudes* rather than personality factors *per se*.

Right-Wing Authoritarianism (RWA; Altemeyer, 1988, 1998) was intended as a refinement of Adorno et al.'s (1950) F-scale. It includes only three of the original nine subscales: conventionalism, authoritarian submission, and authoritarian aggression. Extensive research shows that people high in RWA favour traditional roles and values, and are submissive to authority figures seen as 'legitimate'. They perceive the world as more dangerous (Duckitt, 2001) and fear inducing (Altemeyer, 1988), have conservative economic philosophies, and generally support conservative religious institutions (Altemeyer, 1998). In addition, these people have increased prejudice toward ethnic minorities, including African Americans (Whitley, 1999), homosexuals (Goodman & Moradi, 2008), and people from different religious backgrounds (Baum, 2009). Altemeyer (1998) writes that these authoritarian submissives are "equal opportunity bigots" (p. 52). RWA is characterised by security, conformity and tradition, as compared with openness, stimulation and self-direction.

The second major factor of social attitudes, Social Dominance Orientation (SDO; Sidanius, 1993; Sidanius & Pratto, 1999), refers to a general attitudinal orientation to intergroup

relations, reflecting preference for equal vs. hierarchical structures. SDO was conceptualised as an individual difference variable reflecting the desire to have one's in-group be superior and to dominate over out-groups (Pratto, Sidanius, Stallworth, & Malle, 1994). SDO results in stereotyping, endorsing traditional societal roles, and a general belief that successful people (or groups) deserve their success (Biernat, Vescio, Theno, & Crandall, 1996). SDO is positively correlated with Machiavellianism and generally selfish motivations, and negatively correlated with measures of sympathy or empathy (Altemeyer, 1998). SDO is characterised by self-enhancement (achievement, power and hedonism) as compared with self-transcendence.

Compared to RWA, people high in SDO are thought less likely to be motivated by fear, religiosity, or a belief in a dangerous world (Altemeyer, 1998), but are more likely to support social stratification and oppose attempts to reduce societal inequalities (Altemeyer, 2004). The 20-item SDO scale (Pratto et al., 1994) has been shown to predict prejudice toward groups which advocate equality, including ethnic minorities, homosexuals (Whitley & Lee, 2000), and women (Whitley, 1999).

Correlations between RDA and SDO are generally weak in North American samples but are larger in European ones. For example, Whitley (1999) found weak to non-significant correlations in samples of American participants, whereas Ekehammar, Akrami, Gylje, & Zakrisson (2004) found a strong correlation between RWA and SDO ($r = .52$) in a Swedish sample. Although there are similarities between SDO and RWA, even beyond their general usefulness in predicting prejudice, they are considered conceptually distinct.

Cognitive Constructs related to RWA and SDO

There may be cognitive biases in social attitudes, and two measures are useful for exploring this possibility. Need for Cognition refers to individual differences in the desire for

thinking or engaging in cognitively demanding activities (Cacioppo, & Petty, 1982). Previous work has found it has small-to-moderate negative correlations with RWA and SDO (e.g., Cornelis & Van Hiel, 2006). Roets and Van Hiel (2006) found, while Need for Cognition has some association with prejudicial attitudes, its effect was mediated through RWA scores.

Need for Cognitive Closure is related to an individual's desire for clear cognitive closure, as opposed to ambiguity tolerance (Kruglanski, Webster, & Klem, 1993). This desire to eliminate ambiguity may lead to an over-reliance on heuristics or stereotypes, a precursor to prejudice. Roets and Van Hiel (2011a) argue that the motivation for closure underlies social categorization and generalised prejudice toward out-groups. Roets and Van Hiel (2011b) found .57 and .25 correlations between Need for Closure and RWA and SDO, respectively.

Personality and Social Attitudes

A meta-analysis by Sibley and Duckitt (2008) found that RWA was predicted by low Openness ($r = -.36$) and weakly by high Conscientiousness ($r = .15$); and SDO was predicted by low Agreeableness ($r = -.29$), and by low Openness ($r = -.16$). Increased levels of Agreeableness and Openness were associated with decreased prejudice ($r_s = -.22$ & $-.30$, respectively). Ekehammar et al. (2004) found similar associations.

These associations with FFM personality factors are valuable but they leave open the question as to the contribution from basic approach and avoidance personality factors. Assuming that social attitudes and prejudice are 'motivated', we might usefully explore the role of more basic personality factors. For example, they could be negatively motivated, by either fear or anxiety, elicited by thoughts of the out-group, or positively motivated by perceived competition with the out-group. The former hypothesis is wide-spread in the prejudice literature (Adorno et

al., 1950; Allport, 1954). But, there is reason to believe that the positive-approach factors are related to social attitudes and prejudice. Harmon-Jones (2003) demonstrated that the Behavioural Approach System (BAS), but not the Behavioural Inhibition System (BIS), is related to anger and physical hostility; therefore, the BAS should be involved in situations where social attitudes and prejudice are driven by these BAS-related negative emotions. Indeed, studies measuring intergroup emotions generally find that anger is the most important motivating factor behind prejudice and offensive action tendencies (e.g., Seger, Smith, Kinias, & Mackie, 2009; Smith, Seger, & Mackie, 2007), above and beyond feelings of fear or anxiety. However, there may also be more positive-approach predatory motivations that are positively reinforcing. Whether these putative BAS effects are restricted to anger/aggression or reflect a more appetitive motivation is a major focus of this paper.

Approach-Avoidance Personality Theories

The nature of approach-avoidance personality factors, including their relation to the FFM, has been described elsewhere (Corr, DeYoung, & McNaughton, 2013). The model applied here is reinforcement sensitivity theory (RST, Corr, 2008), which posits two systems of defence (*fight-flight-freeze system*, FFFS; and *behavioural inhibition system*, BIS) and one of approach (*behavioural approach system*, BAS). The FFFS is responsible for mediating reactions to *all* aversive stimuli and is related to the emotion of fear. The BIS is responsible for the resolution of goal conflict in general (e.g., between BAS-approach and FFFS-avoidance) and is related to the emotion of anxiety, which is as distinct from fear. The BAS is responsible for mediating reaction to all appetitive stimuli and is related to the emotions of hope and anticipatory pleasure. These systems are often measured by the Carver and White (1994) BIS/BAS scales, but with the development of RST (Corr, 2008) has come the need for more refined scales of the type

developed by Corr & Cooper (2013), which contains separate measures of FFFS and BIS, and the BAS (conceptualised in multidimensionality terms).

Aims

The study had several aims. First, to examine the relations between different measures of social attitudes and related cognitive measures; and, secondly, to relate these different measures to general factors of personality as well as more specific approach-avoidance ones. It was expected that we would broadly replicate previous research relating the FFM to RWA and SDO, and, also, we predicted that positive-approach personality factors would significantly correlate with RWA and SDO. If supported, this latter finding would be novel and of theoretical significance, and possibly also of practical utility in designing effective prejudice reduction programmes..

Method

Participants

One hundred and ten native English speakers (69 female, age = 22.59, SD = 6.84; 40 male, age = 23.65, SD = 6.07, one not specified) completed the survey at an English university. Participants were recruited through postings on an online participant pool and message board. They earned £15 for their participation. Eighty-seven participants (79.1%) identified themselves as 'White British', and seven participants (6.3%) as 'Indian'.

Materials and procedure

Participants completed a battery of paper and pencil questionnaires in one setting, tested in individual cubicles. They were instructed to take as long as needed to complete the questionnaires.

Personality Measures

The Reinforcement Sensitivity Theory Personality Questionnaire (RST-PQ, Corr & Cooper, 2013) was used to assess components of approach-avoidance motivation. The RST-PQ consists of 80 items, providing scales FFFS and BIS, and four BAS scales: Reward Interest, Goal-Drive Persistence, Reward Reactivity, and Impulsivity. Two other scales are also included: Panic and Fight. A related questionnaire, the Carver and White (1994) BIS/BAS scales, was also included to measure approach and avoidance motivations more generally. This questionnaire has one general BIS subscale and three approach subscales: Drive, Fun, and Reward Responsiveness. General personality factors were measured with the Five-Factor Model Questionnaire (DeYoung, Quilty, & Peterson, 2007).

Social Attitude Measures

The two major dimensions of social attitudes were measured by the Right Wing Authoritarianism (RWA; Altemeyer, 2006) and the Social Dominance Orientation (SDO; Sidanius & Pratto, 1999) scales. In addition, cognitive measures of social attitudes were also included: The Revised Need for Closure Scale (Roets & Van Hiel, 2007) and the Need for Cognition Scale (Cacioppo & Petty, 1982). A Social Desirability Scale (Crowne & Marlowe, 1960) was included to control for possible response distortion in the above measures.

Results

Descriptive statistics for all variables are shown in Table 1. Intercorrelations of the social attitude and cognitive measures are shown in Table 2. Correlations of personality with the social attitude and cognitive measures are shown in Table 3.

Tables 1, 2 & 3 about here

Correlations between age and social attitude and cognitive measures were non-significant ($p < .05$). In terms of Right-Wing Authoritarianism (RWA) and Social Dominance (SDO), the two were positively correlated, but whereas RWA was positively correlated with Need for Closure and negatively correlated with Need for Cognition, SDO was not significantly correlated with either of these measures. Need for Cognition and Need for Closure displayed a moderately negative relationship. Social Desirability was unrelated to either RWA or SDO, indicating that this form of response distortion was not found in this study.

In terms of correlations with personality measures, the following broad patterns were observed. In regard to the Five-Factor Model, RWA and SDO showed a different pattern of correlations. High SDO scorers were extraverted and disagreeable; whereas, in addition, high RWA scorers were also closed-minded and conscientious. On this pattern of correlations, RWA was similar to SDO but with the addition of a lack of open mindedness and a higher degree of conscientiousness. Need for Cognition was related only to higher openness; whereas Need for Closure was related to higher conscientiousness and neuroticism.

In terms of the approach-avoidance personality measures, an intriguing pattern of correlations was found. SDO was positively correlated with BAS Drive, Reward Interest, and Fight; and it was not significantly correlated with any of the avoidance measures, of BIS, and FFFS, which paralleled the lack of association with FFFM Neuroticism. RWA showed a similar set of relations, but there was a weak positive association with FFFS, but not the BIS. It was evident that RWA was most strongly related to all of the BAS scales, pointing to its positive-approach motivational basis.

Need for Cognition was negatively correlated with both FFFS but only one BIS measure, whereas Need for Closure was positively correlated with both negative measures, as well as panic. Social Desirability had no consistent effect on BAS measures, but was negatively correlated with BIS measures.

To further understand the effects of approach and avoidance motivation on RWA and SDO, a series of hierarchical stepwise regressions were conducted. Using RWA as the dependent variable, the two defensive measures of the Corr and Cooper (2013) scales (FFFS and BIS) were entered in the first block. The four BAS subscales (Reward Reactivity, Reward Interest, Goal Drive Persistence, and Impulsivity) were entered in the second block. Only FFFS was significant in the first block, $\beta = .195$, $t = 2.06$, $p = .042$; and only Goal-Drive Persistence was significant in the second block, $\beta = .337$, $t = 3.75$, $p < .001$ (FFFS fell to marginal non-significance, $t = 1.89$, $p = .061$). The model improved with the addition of the second block, $\Delta R^2 = .113$, $F(1, 106) = 14.06$, $p < .001$, total $R^2 = .151$. The same analysis was repeated with SDO as the dependent variable. Neither of the defensive scales were significant ($ps > .20$); and only Reward Interest reached significance in the second block, $\beta = .191$, $t = 1.99$, $p = .05$, $R^2 = .037$.

The Carver and White subscales were then used to predict RWA. The general BIS subscale was entered in the first block, the three BAS subscales (Drive, Fun Seeking, and Reward Responsiveness) were entered in the second block. The BIS scale failed to reach significance. In the second block, only BAS Drive was significant, $\beta = .356$, $t = 3.88$, $p < .001$, $R^2 = .127$. Repeating this analysis for SDO, the BIS scale again failed to reach significance. In the second block, BAS Drive was a significant predictor of SDO, $\beta = .436$, $t = 4.424$, $p < .001$, Reward Responsiveness also reached significance, $\beta = -.225$, $t = 2.29$, $p = .024$, $R^2 = .150$.

Discussion

Our aim was to examine the associations between the main dimensions of social attitudes (RWA and SDO), and related cognitive constructs (need for cognition and need for closure), with general factors of personality (FFFM) and specific approach-avoidance personality factors. The results were straightforward and open to an interpretation that throws new light upon the dispositional motivational bases of social attitudes.

RWA and SDO were largely unrelated to neuroticism, fear and anxiety, but were consistently related to extraversion and positive approach measures. And whereas both RWA and SDO were related to low agreeableness, RWA seemed characterized by being associated also with low open-mindedness and high conscientiousness. These results suggest that RWA and SDO as major social attitudes are related to a more predatory form of approach than a defensive form of avoidance. These results suggest a more nuanced picture of the relationship between personality and social attitudes than that suggested in the literature. In particular, social attitudes seem not to be related to negative emotions and motivations, but rather to positive-approach ones. Both have an aggressive fight component and, in addition, to be generally disagreeable,

RWA is distinguished by being associated with low openness and high conscientiousness. This information is new and potentially of some importance to our understanding of the motivations underneath social attitudes. For example, the difficulty of reducing these negative social attitudes may be due, in large measure, to the appetitive drive and pleasure derived from them – they are highly positively reinforcing.

In contrast to these RWA/SDO findings, the cognitive constructs showed a different pattern of correlations. Need for Cognition was associated negatively with BIS, FFFS, and positively with openness to experience (reflecting a more liberal vs. conservative way of thinking); and correlations with positive-approach measures were largely absent. Showing an opposite pattern of associations, Need for Closure was associated positively with BIS, FFFS, neuroticism and conscientiousness, and also positively with many of the positive-approach measures. Whereas Need for Cognition seemed to relate to low negative emotions and openness, Need for Closure was related to high negative emotions but also to high positive emotions, suggesting general neuroticism.

These data provide evidence for the general claim that positive-approach motivation underlies the individual differences in the major forms of social attitude (Seger & Corr, 2012). Although there was a weak correlation between FFFS (fear) and RWA, there is little evidence to support the claim that measures of the FFFS, BIS, or general neuroticism, are related to authoritarian submission or social dominance. The primacy of approach, but not avoidance, motivation is in disagreement with previous research and previous conceptualizations that suggest authoritarian submission is motivated primarily by fear and anxiety. Consistent with some previous research that suggests that anger, an approach emotion, is a strong component of negative evaluations (Smith et al., 2007), BAS-approach had a much stronger effect than BIS

overall, as did the specific measure of Fight which has previously been related to BAS motivation (Harmon-Jones, 2003). The general finding that approach motivation is more important in prejudice than previously thought is consistent with recent calls for a conceptualisation of social attitudes and prejudice (Dixon et al., 2012).

Future research needs to examine real-world and behavioural consequences of approach-avoidance motivational processes as it relates to social attitudes, related cognitive factors, and full-blown prejudice. If positive-approach motivation underlies SDO and RWA, then it should also motivate political action, support for inequality, and hostile intergroup behaviours. This is a fertile field for further research, and one infused with practical implications.

Limitations

Although our sample was adequate to test the research hypotheses, the age range was restricted and most of our participants were university students. Although it might be assumed that, in a young and largely student sample, there would be a restriction of range in the RWA and SDO, we did measure enough variance which covaried with personality measures. Further research on social attitudes, and especially measures of prejudice which may be prone to more social desirability effects, would benefit from the use of a larger and more representative sample (in terms of age, socioeconomic status, etc). We see our data as only a preliminary start to such a more comprehensive investigation of the relationships between personality and social attitudes (and specific objects of prejudice).

Conclusions

Our results suggest that social attitudes, and by extension prejudice, are multidimensional constructs and that their different aspects are related in systematic ways to

personality processes related to basic approach and avoidance motivation. In particular, positive-approach motivation may play a much more important role in predicting social attitudes and prejudice than previously thought, and certainly no less than traditional views that focus on negative-avoidance motivation.

References

- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The Authoritarian Personality*. New York: Harper & Row.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Perseus Books.
- Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism*. San Francisco, CA, US: Jossey-Bass.
- Altemeyer, B. (1998). The other 'authoritarian personality'. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 30, pp. 47-92). Orlando, FL: Academic.
- Altemeyer, B. (2004). Highly dominating, highly authoritarian personalities. *Journal of Social Psychology, 144*, 421-447.
- Altemeyer, B. (2006). *The Authoritarians*. Winnipeg, Canada: Author.
- Baum, S. K. (2009). Christian and Muslim anti-Semitic beliefs. *Journal of Contemporary Religion, 24*, 137-156.
- Biernat, M., Vescio, T. K., Theno, S. A., & Crandall, C. S. (1996). Values and prejudice: Toward understanding the impact of American values on out-group attitudes. In C. Seligman, J. M. Olson, & M. P. Zanna, (Eds.), *The psychology of values: The Ontario symposium, Vol. 8. The Ontario symposium on personality and social psychology, Vol. 8.* (pp. 153-189). Hillsdale, NJ, USA: Lawrence Erlbaum Associates.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology, 42*, 116-131.

- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioural activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. *Journal of Personality and Social Psychology*, 67, 319-333.
- Cornelis, I., & Van Hiel, A. (2006): The Impact of cognitive styles on authoritarianism based conservatism and racism. *Basic and Applied Social Psychology*, 28, 37-50.
- Corr, P. J. (2008). *The reinforcement sensitivity theory of personality*. Cambridge University Press.
- Corr, P. J., & Cooper, A. (2013). The Corr-Cooper Reinforcement Sensitivity Theory Personality Questionnaire (RST-PQ): Development and validation. Unpublished.
<http://www.philipcorr.net/uploads/downloads/153.pdf>
- Corr, P. J., DeYoung, C. G., & McNaughton, N. (2013). Motivation and personality: A neuropsychological perspective. *Social and Personality Psychology Compass*, 7, 158-175.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.
- DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology*, 93, 880-896.
- Dixon, J., Levine, M., Reicher, S., & Durrheim, K. (2012). Beyond prejudice: Are negative evaluations the problem and is getting us to like one another more the solution? *Behavioral and Brain Sciences*, 35, 411-466.

- Duckitt, J. (2001). A dual-process cognitive-motivational theory of ideology and prejudice. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 41-113). San Diego: Academic Press.
- Duckitt, J., & Sibley, C. G. (2010). Personality, ideology, prejudice, and politics: A dual-process motivational model. *Journal of Personality*, 78, 1861-1893.
- Ekehammar, B., Akrami, N., Gylje, M., & Zakrisson, I. (2004). What matters most to prejudice: Big Five personality, Social dominance orientation, or right-wing authoritarianism? *European Journal of Personality*, 18, 463-482.
- Eysenck, H. J. (1944). General social attitudes. *Journal of Social Psychology*, 19, 207-227.
- Eysenck, H. J. (1947). Primary social attitudes 1. The organization and measurement of social attitudes. *International Journal of Opinion and Attitude Research*, 1, 49-84.
- Eysenck, H. J. (1954). *The psychology of politics*. London: Routledge.
- Goodman, M. B., & Moradi, B. (2008). Attitudes and behaviors toward lesbian and gay persons: Critical correlates and mediated relations. *Journal of Counseling Psychology*, 55, 371-384.
- Gough, H. G. (1951). Studies of social intolerance: II. A personality scale of anti-Semitism. *Journal of Social Psychology*, 33, 247-255.
- Guimond, S., & Dambrun, M. (2002). When prosperity breeds intergroup hostility: The effects of relative deprivation and relative gratification on prejudice. *Personality and Social Psychology Bulletin*, 7, 900-912.
- Harmon-Jones, E. (2003). Anger and the behavioral approach system. *Personality and*

Individual Differences 35, 995–1005.

Kruglanski, A. W., Webster, D. M., & Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology*, 65, 861-876.

Pratto, F., Sindanius, J., Stallworth, L., & Malle, B. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67, 741-763.

Reichard, S. (1948). Research study of prejudiced personality. *American Journal of Orthopsychiatry*, 18, 280-286.

Roets, A., & Van Hiel, A. (2007). Separating ability from need: Clarifying the dimensional structure of the need for closure scale. *Personality and Social Psychology Bulletin*, 33, 266-280.

Roets, A., & Van Hiel, A. (2006). Need for closure relations with authoritarianism, conservative beliefs and racism: The impact of urgency and permanence tendencies. *Psychologica Belgica*, 46, 235–252.

Roets, A., & Van Hiel, A. (2011a). The role of need for closure in essentialist entitativity beliefs and prejudice: An epistemic needs approach to racial categorization. *British Journal of Social Psychology*, 50, 52-73.

Roets, A., & Van Hiel, A. (2011b). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences*, 50, 90-94.

- Rokeach, M., Smith, P. W., & Evans, R. I. (1960). Two kinds of prejudice or one? In M. Rokeach (Ed.), *The open and closed mind*. New York: Basic Books.
- Sanford, R. N., Adorno, T. W., Frenkel-Brunswik, E., & Levinson, D. J. (1950). The measurement of implicit antidemocratic trends. In T. W. Adorno, E. Frenkel-Brunswik, D. J., Levinson, & R. N. Sanford (Eds.), *The authoritarian personality* (pp. 222–279). New York, NY: Harper.
- Seger, C. R., & Corr, P. J. (2012). Prejudice and personality: A role for positive-approach processes? *Behavioral and Brain Sciences*, 35, 411.
- Seger, C. R., Smith, E. R., Kinias, Z., & Mackie, D. M. (2009). Knowing how they feel: Predicting emotions felt by out groups. *Journal of Experimental Social Psychology*, 45, 80-89.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12, 248-279.
- Sidanius, J. (1993). The Psychology of group conflict and the dynamics of oppression: A social dominance perspective. In S. Iyengar W. McGuire (Eds.), *Explorations in political psychology* (pp. 183-219). Durham, NC: Duke University Press.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.
- Smith, E. R., Seger, C. R., & Mackie, D. M. (2007). Can emotions be truly group-based? Evidence regarding four conceptual criteria. *Journal of Personality and Social Psychology*, 93, 431-446.

Spears, R., Leach, C., van Zomeren, M., Ispas, A., Sweetman, J., & Tausch, N. (2011).

Intergroup emotions: More than the sum of the parts. In I. Nyklicek, A. Vingerhoets, & M. Zeelenberg, (Eds.), *Emotion regulation and well-being*. London, UK: Springer.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of inter-group behavior. In S.

Worchel, & L. W. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago, US: Nelson-Hall.

Whitley Jr., B. E. (1999). Right-wing authoritarianism, social dominance orientation, and prejudice. *Journal of Personality and Social Psychology*, 77, 126-134.

Whitley Jr., B. E., & Lee, S. E. (2000). The relationship of authoritarianism and related constructs to attitudes toward homosexuality. *Journal of Applied Social Psychology*, 30, 144-170.

Table 1. Descriptive statistics for social attitude and personality measures

Questionnaire Measures	Mean	SD
Right Wing Authoritarianism (RWA)	60.59	22.87
Social Dominance Orientation (SDO)	22.51	15.74
Need for Cognition	60.43	10.77
Need for Closure	150.65	22.95
Social Desirability	14.93	5.20
C&W: BAS Drive	10.85	2.32
C&W: BAS Reward Response	16.75	2.27
C&W: Fun Seeking	11.85	2.31
C&W: BIS	22.01	3.45
RST-PQ: Fight	2.69	.54
RST-PQ: Panic	2.25	.72
RST-PQ: BIS	2.57	.57
RST-PQ: FFFS	2.20	.60
RST-PQ: BAS Reward Interest	2.80	.63
RST-PQ: BAS Goal Drive	3.04	.57
RST-PQ: BAS Reward Reactivity	3.00	.48
RST-PQ: BAS Impulsivity	2.54	.55
FFM: Extraversion	3.37	.59
FFFM: Neuroticism	3.03	.68
FFFM: Openness	3.63	.48
FFFM: Conscientiousness	3.25	.53

FFFM: Agreeableness	4.00	.44
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Note. C&W: Carver & White (1994) BIS/BAS scales. RST-PQ: Reinforcement Sensitivity

Theory Personality Questionnaire (Corr & Cooper, 2013). FFM: Five-Factor Model

Questionnaire (DeYoung, Quilty, & Peterson, 2007). BIS = Behavioural Inhibition System;

FFFS = Fight-Flight-Freeze System; BAS = Behavioural Approach System.

Table 2. Pearson product-moment correlations for social attitudes, cognitive and social desirability measures

Social Attitude and Cognitive Measures	1	2	3	4	5
1. Right Wing Authoritarianism	1.00	.494**	-.222*	.338**	0.10
2. Social Dominance Orientation	.494**	1.00	-0.14	0.19	-0.10
3. Need for Cognition	-.222*	-0.14	1.00	-.313**	.204*
4. Need for Cognitive Closure	.338**	0.19	-.313**	1.00	-0.13
5. Social Desirability	0.10	-0.10	.204*	-0.13	1.00

Note. * = $p < .05$, ** $p < .01$, two-tailed.

Table 3. Pearson product-moment correlations between personality measures and social attitudes, cognitive and social desirability measures

Personality Measures	RWA	SDO	Need Cognition	Need Closure	Social Desirability
C&W BAS Drive	.344**	.356**	-.058	-.010	-.107
C&W BAS Reward Response	.109	-.061	-.030	.242*	-.037
C&W BAS Fun Seeking	-.064	.054	.167	-.331**	.128
C & W BIS	.052	-.090	-.227*	.513**	-.189*
RST-PQ: Fight	.304**	.237*	-.049	.067	-.184
RST-PQ Panic	-.039	.083	-.141	.429**	-.178
RST-PQ BIS	-.004	.080	-.121	.463**	-.196*
RST-PQ: FFFS	.195*	.003	-.386**	.351**	-.084
RST-PQ BAS Reward Interest	.312**	.192*	.114	.008	.248**
RST-PQ BAS Goal Drive Persistence	.349**	.124	.057	.227*	.175
RST-PQ: BAS Reward Reactivity	.338**	.174	-.169	.227*	.067

RST-PQ: BAS	.216 [*]	.183	-.072	-.053	-.053
Impulsivity					
FFFM: Extraversion	.264 ^{**}	.223 [*]	.093	-.095	.144
FFFM: Neuroticism	-.015	.067	-.181	.495 ^{**}	-.315 ^{**}
FFFM: Openness	-.313 ^{**}	-.130	.483 ^{**}	-.124	-.075
FFFM:	.414 ^{**}	.092	-.015	.537 ^{**}	.216 [*]
Conscientiousness					
FFM: Agreeableness	-.321 ^{**}	-.458 ^{**}	.033	.044	.285 ^{**}

Note. See Table 1 for labels.

